We claim:

1. A method for electronically trapping a first digital color image pixel comprising a plurality of colorant values, the method comprising:

identifying a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values;

comparing a colorant value of each of the surrounding pixels with a corresponding colorant value of the first pixel;

identifying one of the surrounding pixels to control trapping of the first pixel; and

trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the identified controlling pixel.

2. The method of claim 1, wherein the surrounding pixels comprise a circular shape.

3. The method of claim 1, wherein the surrounding pixels comprise an elliptical shape.

4. The method of claim 1, wherein comparing further comprises determining differences between a colorant value of the each of the surrounding pixels and a corresponding colorant value of the first pixel.

5. The method of claim 4, wherein comparing further comprises determining a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

6. The method of claim 4, wherein comparing further comprises determining a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

7. The method of claim 4, wherein comparing further comprises determining a difference between a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a

magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

8. The method of claim 1, further comprising adjusting the compared colorant values of each of the surrounding pixels based on a corresponding distance between the surrounding pixel and the first pixel.

9. The method of claim 1, wherein the relationship comprises a difference between a colorant value of the identified pixel and a corresponding colorant value of the first pixel.

10. The method of claim 1, wherein the colorant values comprise cyan, magenta, yellow and black colorants.

11. A method for electronically trapping a first digital color image pixel comprising a plurality of colorant values, the method comprising:

identifying a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values;

evaluating a function of a colorant value of each the surrounding pixels and a corresponding colorant value of the first pixel;

identifying one of the surrounding pixels to control trapping of the first pixel; and

trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the identified controlling pixel.

12. The method of claim 11, wherein the surrounding pixels comprise a circular shape.

13. The method of claim 11, wherein the surrounding pixels comprise an elliptical shape.

14. The method of claim 11, wherein the function determines differences between a colorant value of the each of the surrounding pixels and a corresponding colorant value of the first pixel.

15. The method of claim 14, wherein the function determines a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

16. The method of claim 14, wherein the function determines a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

17. The method of claim 14, wherein the function determines a difference between a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

18. The method of claim 11, further comprising adjusting the compared colorant values of each of the surrounding pixels based on a corresponding distance between the surrounding pixel and the first pixel.

19. The method of claim 11, wherein the relationship comprises a difference between a colorant value of the identified pixel and a corresponding colorant value of the first pixel.

20. The method of claim 11, wherein the colorant values comprise cyan, magenta, yellow and black colorants.

21. A method for electronically trapping a first digital color image pixel comprising a plurality of colorant values, the method comprising:

identifying a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values;

evaluating a function value associated with each of the surrounding pixels, each function value comprising a difference between the colorant values of the corresponding surrounding pixel and corresponding colorant values of the first pixel;

adjusting each of the function values based on a distance between the corresponding surrounding pixel and the first pixel;

identifying a maximum adjusted function value; and

trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the surrounding pixel associated with the maximum adjusted function value.

22. The method of claim 21, wherein the surrounding pixels comprise a circular shape.

23. The method of claim 21, wherein the surrounding pixels comprise an elliptical shape.

24. The method of claim 21, wherein the function value comprises differences between a colorant value of the each of the surrounding pixels and a corresponding colorant value of the first pixel.

25. The method of claim 24, wherein the function value comprises a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

26. The method of claim 24, wherein the function value comprises a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

27. The method of claim 24, wherein the function value comprises a difference between a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

28. The method of claim 21, wherein the relationship comprises a difference between a colorant value of the first pixel and a corresponding colorant value of the surrounding pixel associated with the maximum adjusted function value.

29. The method of claim 21, wherein the colorant values comprise cyan, magenta, yellow and black colorants.

30. Apparatus for electronically trapping a first digital color image pixel comprising a plurality of colorant values, the apparatus comprising:

means for identifying a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values;

means for comparing a colorant value of each of the surrounding pixels with a corresponding colorant value of the first pixel;

means for identifying one of the surrounding pixels to control trapping of the first pixel; and

means for trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the identified controlling pixel.

31. The apparatus of claim 30, wherein the surrounding pixels comprise a circular shape.

32. The apparatus of claim 30, wherein the surrounding pixels comprise an elliptical shape.

33. The apparatus of claim 30, wherein the comparing means further comprises means for determining differences between a colorant value of the each of the surrounding pixels and a corresponding colorant value of the first pixel.

34. The apparatus of claim 33, wherein the comparing means further comprises means for determining a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

35. The apparatus of claim 33, wherein the comparing means further comprises means for determining a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

36. The apparatus of claim 33, wherein the comparing means further comprises means for determining a difference between a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

37. The apparatus of claim 30, further comprising means for adjusting the compared colorant values of each of the surrounding pixels based on a corresponding distance between the surrounding pixel and the first pixel.

38. The apparatus of claim 30, wherein the relationship comprises a difference between a colorant value of the identified pixel and a corresponding colorant value of the first pixel.

39. The apparatus of claim 30, wherein the colorant values comprise cyan, magenta, yellow and black colorants.

40. Apparatus for electronically trapping a first digital color image pixel comprising a plurality of colorant values, the apparatus comprising:

means for identifying a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values;

means for evaluating a function of a colorant value of each the surrounding pixels and a corresponding colorant value of the first pixel;

means for identifying one of the surrounding pixels to control trapping of the first pixel; and

means for trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the identified controlling pixel.

41. The apparatus of claim 40, wherein the surrounding pixels comprise a circular shape.

42. The apparatus of claim 40, wherein the surrounding pixels comprise an elliptical shape.

43. The apparatus of claim 40, wherein the means for evaluating determines differences between a colorant value of the each of the surrounding pixels and a corresponding colorant value of the first pixel.

44. The apparatus of claim 43, wherein the means for evaluating determines a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

45. The apparatus of claim 43, wherein the means for evaluating determines a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

46. The apparatus of claim 43, wherein the means for evaluating determines a difference between a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

47. The apparatus of claim 40, further comprising means for adjusting the compared colorant values of each of the surrounding pixels based on a corresponding distance between the surrounding pixel and the first pixel.

48. The apparatus of claim 40, wherein the relationship comprises a difference between a colorant value of the identified pixel and a corresponding colorant value of the first pixel.

49. The apparatus of claim 40, wherein the colorant values comprise cyan, magenta, yellow and black colorants.

50. Apparatus for electronically trapping a first digital color image pixel comprising a plurality of colorant values, the apparatus comprising:

means for identifying a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values;

means for evaluating a function value associated with each of the surrounding pixels, each function value comprising a difference between the colorant values of the corresponding surrounding pixel and corresponding colorant values of the first pixel;

means for adjusting each of the function values based on a distance between the corresponding surrounding pixel and the first pixel;

means for identifying a maximum adjusted function value; and

means for trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the surrounding pixel associated with the maximum adjusted function value.

51. The apparatus of claim 50, wherein the surrounding pixels comprise a circular shape.

52. The apparatus of claim 50, wherein the surrounding pixels comprise an elliptical shape.

53. The apparatus of claim 50, wherein the means for evaluating determines differences between a colorant value of the each of the surrounding pixels and a corresponding colorant value of the first pixel.

54. The apparatus of claim 53, wherein the means for evaluating determines a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

55. The apparatus of claim 53, wherein the means for evaluating determines a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

56. The apparatus of claim 53, wherein the means for evaluating determines a difference between a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel.

57. The apparatus of claim 50, wherein the relationship comprises a difference between a colorant value of the first pixel and a corresponding colorant value of the surrounding pixel associated with the maximum adjusted function value.

58. The apparatus of claim 50, wherein the colorant values comprise cyan, magenta, yellow and black colorants.

59. Apparatus for electronically trapping a first digital color image pixel comprising a plurality of colorant values, the apparatus comprising:

a memory adapted to store a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values;

a first logic element adapted to determine differences between the colorant values of each of the surrounding pixels from the corresponding colorant values of the first pixel;

a second logic element adapted to sum magnitudes of the differences associated with each of the surrounding pixels and subtract therefrom a magnitude of a sum of the differences associated with each of the surrounding pixels;

a third logic element adapted to determine the surrounding pixel associated with the maximum sum from the second logic element; and

a fourth logic element adapted to trap the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the surrounding pixel determined by the third logic element.

60. The apparatus of claim 59, wherein the first, second, third and fourth logic elements comprise pipelined logic elements.

61. The apparatus of claim 59, wherein the first logic element comprises a plurality of differencing elements.

62. The apparatus of claim 61, wherein each of the differencing elements corresponds to an associated one of the surrounding pixels.

63. The apparatus of claim 59, wherein the second logic element comprises a plurality of summing elements.

64. The apparatus of claim 63, wherein each of the summing elements corresponds to an associated one of the surrounding pixels.